# The Relationship between Performance and Graphic Presentation in Unit Trusts' Annual Reports: Malaysian Evidence

**Ram Al Jaffri Saad*, Mohd Azlan Yahya, Md Hairi Md Hussain**
*College of Business, Universiti Utara Malaysia, Malaysia.*

## Abstract

*This study investigates the use and abuse of graphs in the annual reports of unit trust companies. It is found that 78% of companies use graphs and that 2.1 is the mean number of graphs per graph-using companies. The most commonly graphed financial variables are asset allocation, performance, investment and fund size. Line and pie graphs are more popular than bar and column. Thus, in contrast to previous studies of graphs in annual reports, no relationship is found between performance and graphic presentation in unit trusts' annual reports. The result may suggest that graphic presentation in unit trust's annual report is normally dependent on the discretion of company's management.*

***Keywords:*** Graphical presentation, impression management, annual report, unit trust

## 1. Introduction

The content of communication between companies and their shareholders has been the subject of considerable research (for example Graves, Flesher & Jordon, 1996; Preston, Wright & Young, 1996 and Beattie & Jones, 2000a). One branch of this literature is concerned with the communication of financial and other information via graphs (Mather, Ramsay & Steen, 2000 and Beattie & Jones, 2000a).

Researchers have discovered that graphs help users in many ways. For instance, they argue that graphs allow investors to evaluate company's financial performance and potential growth of company's value (Pava & Epstein, 1993 and Pijper, 1993). It may also overcome several weaknesses of narrative texts and traditional alphanumeric table (Friend, 1982; Holmes, 1984; Smith & Bain, 1987; Gibson & Schroeder, 1990 and Coles & Rowley, 1997).

* Corresponding author. Tel: +604-9283735 Fax: +604-9285762
*E-mail address*: ram@uum.edu.my

Although graphs have been used intensively in annual reports, most companies use them to disclose only selected information (Neu, 1991 and Beattie & Jones, 1992). Graphs are used as one of the mechanisms to convince the users of annual reports that the company is managed efficiently (Beattie & Jones, 1992). According to Houghton and Smith (2003), graphs are used to influence shareholder behavior. Previous studies show that companies give priority to information on performance such as sales, profit, earning per share and dividends and used various types of graphs to highlight these (Steinbert, 1989 and Beattie & Jones, 1992, 2000a). The relationship between performance and graphic presentation has become a main focus of the researchers and has triggered their interest to understand why companies disclose information using graphs.

The selective inclusion of graphs has been studied extensively in the context of the use of graphs in annual reports (Johnson, Rice & Roemmick, 1980; Steinbert, 1989; Beattie & Jones, 1992; 1997; 1999; 2000a; 2000b; Green, Kirk & Rankin, 1992; Canadian Institute of Certified Accountant, 1993; Mather, Ramsay & Serry, 1996 and Mather, Ramsay & Steen, 2000). In general, these studies have found evidence of significant use of graphs in annual reports. Beattie and Jones (1992) argued that selectivity in the use of graphs could lead to a sub-optimal decision by users of financial information.

In Malaysia, studies on graphic presentation in annual reports are still at infant stage. A number of studies were carried out to investigate the use and abuse of graphic presentation in listed companies on Bursa Malaysia (Shamharir, Md. Suhaimi & Nurwati, 2000; Mohd. Diah & Azhar, 2001; Nor Asiah, Taufik & Narimah, 2004; Ram Al Jaffri, 2004; and Azham & Ram Al Jaffri, 2006) and the users' perception towards graphical information in corporate annual reports (Rosiatimah, Hasnah & Sofri, 2006). The review of these studies reveal that there is evidence of significant use and abuse of graph in annual reports and most of the companies are likely to use graph only when their performance is satisfactory (Shamharir, Md. Suhaimi & Nurwati, 2000; Mohd. Diah & Azhar, 2001; Nor Asiah, Taufik & Narimah, 2004; and Azham & Ram Al Jaffri, 2006).

While a good deal of research on the graphic presentation in annual reports has focused on companies, there has to date been little research on this subject in the context of other settings. Thus, this study differs from previous studies in two respects. First, unlike previous studies which mainly focus on public listed companies, this study focuses on unit trusts, which are another important component of the Malaysian capital market. Secondly, it attempts to discuss the practice of impression management in relation to graphic presentation in unit trusts' annual reports. Hopefully this study will add to the literature on voluntary disclosures in general and graphic presentation in particular. It seeks to contribute to a greater understanding of the role of graphs in communicating accounting information. In addition, it might be useful to enrich the discussion on impression management by providing a different point of view.

We address two specific questions to provide a direction for this study. Do unit trusts give due attention to graphic presentation in their annual reports? Does performance of a unit trust influence the extent of graphic presentation in their annual report? Thus, this study has two main objectives. Firstly, this study seeks to explain the actual practice of graphical presentation by unit trusts. Secondly, it seeks to predict the relationship between the extent of graphical presentation and the unit trust performance.

This study begins with an introduction to graphic presentation in annual reports, followed by a section that discusses the development of unit trust industry in Malaysia to highlight the importance of this study. Section three reviews the literature on the importance of graphical presentation and the issue of impression management in graphical presentation. Explanation relating to how the hypothesis is developed is in section four. Sections five and six discuss the research method and the results of this study. Finally, the last section provides a summary of the study and offers suggestion for future research on graphic presentation in unit trusts.

## 2. The development of unit trust industry in Malaysia

In 1959, the first unit trust was established known as the Malayan Unit Trust Ltd. Since then, the development of this industry has experienced three phases of growth. The first phase (1959-1979) shows a slow growth where only 18 unit trusts were launched. This might be due to ignorance of public towards the importance of long-term investment.

However, the subsequent decade was considered as the turning point for the unit trust industry in Malaysia. The introduction of New Economy Policy that emphasizes on equal distribution of wealth among various ethnic groups in Malaysia was seen as the contributive factor to the growth of the industry. The Malaysian government had identified unit trust as one of potential mechanisms to enhance the bumiputras' shareholdings in listed companies. Hopefully, it will reduce big economic gap between bumiputra and non-bumiputra. To achieve this objective, the government had played important and active role in this industry by launching several government-sponsored unit trusts for bumiputra in early 1980s. In 1981, for example, Permodalan Nasional Berhad (government agency) launched two specific unit trusts namely Amanah Saham Bumiputra and Amanah Saham Nasional and both had received overwhelming response by bumiputra. This led private fund management companies keen to offer new unit trusts to capture the market of non-bumiputra. As a result, there were 11 unit trusts operating in the market at the end of the decade.

From the year 1990 until now, the unit trust industry has experienced an amazing growth. The introduction of Islamic capital market and the economic crisis in the mid 1990s were considered as factors that accelerated the growth of unit trusts. In the context of Islamic capital market, the government had included Islamic unit trust as one

of the main components in order to encourage the involvement of Muslims in capital market. As a result, 42 Islamic unit trusts were launched during this period as compared to 6 Islamic unit trusts in the period prior to 1990.

Even though the economic crisis has been regarded as a tragedy to many economic activities, but in the case of the Malaysian unit trust industry, it revealed a reverse direction. During the crisis in 1997 to 1999, the government had used the establishment of unit trusts as a strategic plan to increase liquidity in the capital market. This strategy had been strongly supported by financial institutions, many of which established their own fund management companies and offered various types of unit trusts such as equity, bond, and mixed unit trust. As a result, the number of unit trusts operating in the market increased tremendously. To date, there were 295 unit trusts have been approved with a net asset value of more than RM 80 billions (Securities Commission, 2005).

## 3. Literature review

Basically, literature on graphic presentation focuses mainly on two aspects. The first one discusses the importance of graphs to users while the second one discusses how management uses graphs to impress users.

### *3.1 The importance of graphs*

Annual reports with congested information and intricate reading pose a challenge in understanding the financial data accurately. The use of graphs is seen as a useful technique in identifying and understanding the trend of financial information. Graphical presentation of numerical data assists readers to observe the trend and draw attention to important data (Coles & Rowley, 1997). Graphs enable the readers to pay attention on one issue at one time, which permit comprehensive overview of corporate attributes to be developed (Courtis, 1997). In addition, graphs are effective tools in the communication process because of the advantages that they have over basic human perceptual and cognitive abilities (Beattie & Jones, 1993).

Apart from that, information disclosed using graphs is more interesting and easy to read. Therefore, it will enhance the role of annual reports in communicating important information to users. Graphs also can improve decision quality or speed among users (DeSantic, 1982 and Brown, 1992). For investors, graphs assist in determining the competency and efficiency of company's operation and performance (Steinbert, 1989 and Beattie & Jones, 1992) because it summarizes and simplifies the complicated financial data (Beattie & Jones, 1997). Libby and Lewis (1977) argue that the fact that human poses certain limitation in information processing capabilities makes graphs become more useful to investors to facilitate them in making an investment decision.

### *3.2 Impression management in graphical presentation*

Despite their usefulness, only selected information is disclosed via graphs. This practice has triggered researchers to discuss and carry out research from different perspective. They argue that the use of graphs in annual report is voluntary in nature, as it is not subject to any standards or rules (Nue, 1991 and Beattie & Jones, 1999). The information presented makes graphs differ from other voluntary disclosures (Beattie & Jones, 1999). Normally, voluntary disclosures present new information whereas graphs highlight the information that is already available in the annual reports but in a summarized form.

The extensive use of performance information such as sales, profit, earning per share, and dividend in the graphs has strengthened the assumptions of the researchers that the management has a hidden agenda in using graphic presentation. A number of studies found consistent results that companies place greater attention to disclose such performance variables in graphs (Beattie & Jones, 1992; 1999; 2000a; 2000b). Moreover the way this information is highlighted will affect the judgment and perception of users towards company's performance (Thomas, 1991). This leads researchers to link the use of graphic presentation with management impression.

In the context of graphic presentation, impression management might be seen as how management select the information to display via graphs in order to impress users that the company is managed efficiently (Steinbert, 1989 and Beattie & Jones, 1992). In this regards, the companies' management has an option on whether to use graphs or not in their annual reports (Beattie & Jones, 1992). The issue is whether the use of graphs and the choice of variable graphs are related to the companies' performance. From a signaling theory perspective, management was found systematically to enhance positive news and hide the negative ones. Deegan and Gorden (1996) examined the relationship between the environmental disclosure in corporate annual reports with companies' performance, and found that the environmental disclosure seem to be managed by management. So, good news was emphasized whereas bad news was censored.

The studies into the use of graphs in annual report (such as Steinbert, 1989; Beattie & Jones 1992; 1999 and Mather, Ramsay & Serry, 1996) demonstrated that graphical formatting choice in the annual report of United States (US), United Kingdom (UK), and Australian companies are consistent with the selectivity issue. Steinbert (1989) found that US companies were more likely to include graph of key financial variables such as sales, income and dividends, when profit had increased rather than decreased. Beattie and Jones (1992; 1999) found that graph of key financial variables such as sales, profit, earnings per share and dividend per share in the annual reports of UK and Australian companies were more likely to be included when company is in favorable rather than unfavorable performance. In their study, performance was classified as good or bad based on the directional change in both general performance indicator

such as sales, profit and earnings per share and the specific key financial variables. Mather, Ramsay and Serry (1996) who study annual reports of Australian companies also found evidence of selectivity in the graphical presentation. They found that the presence of graphs was related to the companies' financial performance. Beattie and Jones (1992) found that the selectivity distortion of graph in annual reports occurred in 176 leading U.S and U.K companies when comparison of graphical reporting practices in both countries were made. Green et al. (1992) also found the evidence of selectivity distortion in Irish semi-state sector and public limited companies annual reports. They discovered that graphs of key financial variable were used significantly in the annual reports when these companies experience good performance rather than bad.

Besides, studies on relationship between graphical presentation and company performance in Malaysia were carried out by Shamharir, Nurwati and Md Suhaimi (2000) and Azham and Ram Al Jaffri (2006). Using annual reports of 130 listed companies in Kuala Lumpur Stock Exchange (KLSE)† for 1997 as their sample, Shamharir, Nurwati and Md Suhaimi (2000) found that most companies were more likely to use graphs in annual report when company is in good performance rather than bad performance. Azham and Ram Al Jaffri (2006) also found the similar findings. Thus, there is a significant positive relationship between graphical presentation and companies' performance.

## 4. Theory and hypothesis

The signaling theory has been widely used by researchers to discuss the concept of impression management and graphic presentation. The theory argues that managements disclose and highlight particular information not only to communicate but to impress users that their performance is outstanding. Managements select only information that is favorable to them and highlight such information through graphs in an unethical manner (Beattie & Jones, 1999). Ross (1979) pointed out that only managers with a strong self-interest would disclose relevant voluntary information in their reports. He then conceived that;

> *The economic fortunes of the management depend on those of the corporation. The performance of the company is affected by the actions of the management and serves as a measure of how well the members have performed. Compensation geared to firm's performance; therefore it serves as an incentive for managerial performance. Managerial compensation does not have to be tied directly by some specific formula to the earnings or overall performance of the firm* (Ross, 1979. p 183).

† Now known as Bursa Malaysia

The above statement clearly supports the argument of the signaling theory on how and why managers are keen to make voluntary disclosures. Managers who have good news will disclose it to increase the value of company as well as managerial compensation. Thus the usage of graphic presentation could be explained as a way how selected information on performance could be highlighted (Verrechia, 1986 and Dye, 1998).

In the context of unit trust, we use three performance variables namely earning per share, return on equity, and net asset value to examine their correlation with the extent of graphic presentation in annual report. We assume that the unit trusts with better earning per share and return on equity will be disclosing more graphic presentation in their annual report.

Unlike managerial compensation in companies, the unit trust's management company is paid based on the commission of daily net asset value. The management's attempt to maximize net asset value not only to increase the value of unit holders but the most important is to maximize their compensation. We assume that management will properly highlight these efforts through graphs to create the image of trustworthy management.

We also include size due to the argument that larger companies have an incentive to disclose more information than smaller companies. It is assumed that larger unit trust will disclose more to attract potential investors to hold unsubscribed units. Thus, management will use graphs to highlight the relevant information (Beattie & Jones, 2000a).

Based on the above argument, the following hypothesis is developed. Due to the exploratory nature of the research, this hypothesis is stated in the null form.

$H_0$: There is no correlation between the extent of graphic presentation with the performance and size of the respective unit trust.

## 5. Research method

This study focuses only on equity unit trusts due to their major composition in the industry. According to Federation of Malaysian Unit Trust Managers (FMUTM) (2003), equity unit trust represents 67.8 per cent (116 out of 171) of the total unit trusts approved for the year-end of 2002. We randomly select the sample from the list of equity unit trusts by using the Statistical Package for Social Science (SPSS). For the final sample, a total number of 86 equity unit trusts' annual reports for the year 2003 are used for further analysis.

The primary focus of this study is to examine the correlation between performance and the extent of graphic presentation. Thus, we use the number of graphs presented in

annual reports as a measure for the extent of graphic presentation. For the performance variables and size, we use the following measures;

Earning per share = net income divided by number of units circulated
Return on equity = percentage of net income to unit holders equity
Net asset value = market value divided by number of unit circulated
Size = number of units circulated

The data are analyzed using SPSS according to objectives of the study. We use descriptive analysis to examine the actual practice of graphic presentation in unit trusts' annual reports and bivariate analysis to examine the correlation between performance, size and graphic presentation.

## 6. Results

This section will discuss the results of analyses performed in order to give explanation to the research questions stated earlier on the graphic presentation by unit trusts.

### *6.1 Practice of graphic presentation*

For the purpose to examine the practice of graphic presentation in unit trusts annual report, we classify unit trusts into three main categories namely government-sponsored, bank-sponsored, and private-sponsored. The incidence of graph-use across industries is presented in Table 1. Graph usage in unit trust is similar to that found in companies' annual report. The results show that each category represents 25.6 per cent, 40.7 per cent, and 33.7 per cent of the sample, respectively. Overall, 67 of 86 (78%) of unit trust sampled included graph, compared to 79 per cent of the 100 component stocks of the KLSE Composite Index that included graphs in their annual reports (Azham & Ram Al Jaffri, 2006).

However, when it comes to the mean number of graphs, the average number of graphs included in unit trusts is much lower than that found in annual reports. In total, from 67 unit trusts that use 142 graphs, the average is 2.1 per unit trust. This compares to an average of 8.1 graphs included in the annual reports of 100 companies under KLSE Composite Index surveyed by Ram Al Jaffri (2004).

The results reveal that only bar, column, line, and pie graph are regularly used by unit trusts to disclose information. In terms of popularity, line and pie graph are the most popular types used in the annual report. Out of 67 unit trusts that have graphic presentation, 62 unit trusts use line graph and 58 unit trusts use pie graph. The frequent use of these types of graph might be related to the types of information disclosed. This

is different to that found in annual reports. As for annual reports, the most frequently employed graphs are bar and column (Azham & Ram Al Jaffri, 2006; Ram Al Jaffri, 2004).

Table 1

*Types of unit trust and graphs*

| Category of unit trust | Sample | Unit trust with graphic presentation | | Types of graphs (no. of graphs) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Bar | Column | Line | Pie |
| Government-sponsored | 22 | 18 | 82% | 1 | 0 | 18 | 15 |
| Bank-sponsored | 35 | 28 | 80% | 8 | 4 | 23 | 28 |
| Private-sponsored | 29 | 21 | 72% | 9 | 0 | 21 | 15 |
| **Total** | **86** | **67** | **78%** | **18** | **4** | **62** | **58** |

Meanwhile, Table 2 displays types of information disclosed using graphs. Unit trusts focus only on four types of information namely fund size, investment, asset allocation, and performance. All the 67 unit trusts that have graphic presentation report information on asset allocation and only one unit trust does not report information on performance. As for fund size, only 12 unit trusts provided the information graphically, while another 26 presented the information on investment using graphs. The results also show that almost all unit trusts use pie graph to disclose information on asset allocation and line graph to disclose information on performance. The usage of these graphs to disclose such information may be appropriate to enhance users' understanding.

Table 2

*Types of information disclosed in graphs*

| Category of unit trust | Unit trust with graphic presentation | Types of information (no. of UT) | | | |
|---|---|---|---|---|---|
| | | Fund size | Investment | Asset allocation | Performance |
| Government-sponsored | 18 | 0 | 11 | 18 | 18 |
| Bank-sponsored | 28 | 8 | 9 | 28 | 27 |
| Private-sponsored | 21 | 4 | 6 | 21 | 21 |
| **Total** | **67** | **12** | **26** | **67** | **66** |

However, the composition of variables presented graphically in unit trust annual reports is in contrast to that found in company annual reports. Ram Al Jaffri (2004) found that 98 per cent of all variables presented graphically in unit trust annual reports are sales, profit, earning per share (EPS) and dividend per share (DPS).

### *6.2 Performances and the extent of graphic presentation*

Table 3 presents the descriptive statistic of the variable used in this study. Based on units circulated, the size of unit trusts varies from 0.8 to 3,000 million units where the average is 274 million units. The largest is Amanah Saham Bumiputra and the smallest is the Sixth Amanah Saham MARA, both are government-sponsored unit trusts. In general, the descriptive statistics show that the two unit trusts did not perform well in year 2003. Earning per share and return on equity indicate that in average, return to unit holders was only RM0.05 and RM0.08 respectively.

Table 3

*Descriptive statistic of the variables (n = 86)*

| Fund characteristic | Minimum | Maximum | Mean |
|---|---|---|---|
| Size (million units in circulation) | 0.80 | 3000 | 274.11 |
| Earning per share | .00 | .21 | .05 |
| Net asset value | .10 | 1.83 | .63 |
| Management fee | 0.03 | 0.98 | 0.20 |
| Return on equity | .00 | .35 | .08 |
| Graph presented | 0 | 6 | 2.99 |

Table 4

*Relationship between performance and the extent of graphic presentation*

| Variables | Pearson Correlation | | Chi-square Test | |
|---|---|---|---|---|
| | Coefficient | Significant level | Pearson Chi-Square | Significant level |
| Return on equity | -0.111 | 0.310 | 516 | 0.418 |
| Earning per share | -0.054 | 0.623 | 496.206 | 0.514 |
| Net asset value | 0.050 | 0.650 | 324.716 | 0.478 |
| Size | 0.021 | 0.850 | 516 | 0.418 |

For the correlation between performance and the extent of graphic presentation, as shown in Table 4, both results of Pearson Correlation and Chi square test indicate that none of the performance variables and size correlates with the number of graphs presented in unit trusts annual report. Thus, this study fails to reject the null hypothesis. This finding is not consistent with previous studies of graphs in annual reports, where the evidence of selectivity in the extent of graphs is found (see Beattie & Jones, 1992; 1999).

## 7. Discussion

The first objective of this study is to identify how extensive unit trust companies use graphs in annual reports. An analysis of the sample of equity unit trusts shows that graphs are used extensively in annual reports. Overall, 67 of 86 (78%) of sample companies disclose at least one graph in their annual report. The finding is consistent with the other studies. For example, Azham and Ram Al Jaffri (2006) reported that 79% of companies use graph in their annual reports. This percentage is higher than the result of study conducted in Asian countries such as in Hong Kong (John, 1997) but lower than study conducted in Australia and Canada (Beattie & Jones, 1999; CICA, 1993). In Australia, for example, 89% of 100 top companies use graphs in their annual reports. The extensive use of graph by equity unit trusts companies give an indication that graphs play an important role as effective tools in the communication process between companies and their investors.

This study reveals line graph as the most popular types of graphical presentation whereas asset allocation and financial performance serve as the most disclosed information via graph. However, previous studies in different setting show contradicting result. For example, bar graph became the most frequently used graphs in company annual reports. Key financial variables such as sales, profit, earning per share and dividend per share were the most frequently presented in graphical presentation (Azham & Ram Al Jaffri, 2006). This result also consistent with the perception of users of annual reports where the five most important variables graphs preferred by them are sales graph, earnings, EPS, share price and cash flows graph (Rosiatimah, Hasnah & Sofri, 2006).

In discussing the second objective which relates to impression management, this study did not succeed in providing evidence that performance influence the number of graphs presented. Therefore, we could conclude that the usage of graphs in unit trusts' annual report was not to impress users. Thus, the relationship between performance and the extent of graphic presentation seems not applicable in the unit trusts setting. Manual investigation of unit trusts' annual report was carried out to provide alternative explanation to these findings. We discovered that the graphic presentation of unit trusts' annual report is normally dependant on management's discretion. The format of reporting for all unit trusts has been standardized regardless of performance and size. For example, not even a single graph was presented in annual report of unit trusts

managed by AmInvestment Services Berhad. On the other hand, all the five unit trusts managed by Mayban Unit Trusts Berhad present six graphs in its annual report.

## 8. Conclusion

This study investigates the usage of graphic presentation in unit trust's annual report. The findings show that graphs have been extensively used in annual reports to disclose selected information particularly information on asset allocation and performance. However, this study fails in providing evidence that performance is a determining factor to the number of graphs presented. The implications of the study could be interpreted from both the theoretical and practical perspectives.

From the theoretical perspective, the findings may possibly provide initial justification to the argument by most of the researchers on the importance of graphs in annual reports. Extensive use of graph in disclosing financial information proves that unit trusts companies have awareness on the importance of graphic presentation. This is mainly to enhance users' understanding on the information disclosed in annual reports. From the practical perspective, the result shows that there is no significant relationship between performance and graphic presentation in unit trusts' annual report. This would provide an indication that the issue of impression management is not applicable in unit trusts' financial reporting. Since the inclusion of graph in annual report is a voluntary disclosure, it gives an option to the management of the company whether to use it or not. Therefore, Standard setters (such as Malaysian Accounting Standard Board) need to issue guidelines for companies to follow when disclosing graphical information.

The result of this study should be carefully interpreted since a number of limitations exist. This study focuses on equity unit trusts and excludes the other types of unit trusts such as property, bond and money market. Therefore, the result may not be applicable to other settings. Further evidence is required in generalizing the use and 'abuse' of graph in annual report.

Besides, this study may offer an essential opportunity for future research to study graphic presentation from different perspective. For instance, future study could try to come out with much larger sample size and then investigate it in different contexts such as different time frame or different company annual reports such as Initial Public Offering (IPO) and corporate takeovers reports.

## References

Annual report of Federation of Malaysian Unit Trust Managers (FMUTM) (2003)

Azham, M. A & Ram Al Jaffri, S. (2006). Malaysian financial graphs: An empirical study. *The International Journal of Management Studies*, 13(2), 45-74.

Beattie, V. & Jones, M. J. (1992). The use and abuse of graphs in annual reports: Theoretical framework and empirical study. *Accounting and Business Research*, 22(88), 291-303.

Beattie, V. & Jones, M. J. (1993). Graphs in annual reports: Benefits or pitfalls. Management Accounting, 71(6), 38.

Beattie, V. & Jones, M. J. (1997). A comparative study of the use of financial graphs in the corporate annual reports of major U.S and U.K companies. *Journal of International Financial Management and Accounting*, 8(1), 33-68.

Beattie, V. & Jones, M. J. (1999). Australian financial graphs: An empirical study. *Abacus*, 35(1), 46-76.

Beattie, V. & Jones, M. J. (2000a). Impression management: The case of inter-country financial graphs. *Journal of Accounting, Auditing and Taxation*, 9(2), 159-83.

Beattie, V. & Jones, M. J. (2000b). Changing graph use in annual reports: A time series analysis. Contemporary Accounting Research, 17(2), 213-26.

Brown, P. A. (1992). The relationship between graphic aids in a business report and decision-making and cognitive style of a report reader. *The Delta Pi Epsilon Journal*, 34(2), 63-76.

Canadian Institute of Certified Accountant (CICA) (1993). Using ratios and graphics in financial reporting, Toronto: CICA.

Coles, S. & Rowley, J. (1997). Creating effective graphs and charts. Industrial Management and Data Systems, 97(3), 114-18.

Courtis, J. K. (1997). Corporate annual report graphical communication in Hong Kong: Effective of misleading? *Journal of Business Communication*, 34(3), 269-88.

Deegan, C. & Gordon, B. (1996). A study of environmental disclosure practices of Australian companies. Accounting and Business Research, 26(3), 187-200.

DeSantics, G. & Jarvenpaa, S. L. (1982). Graphical investigation of accounting data for financial forecasting: An experimental investigation. Accounting, Organizations and Society, 14(4/6), 509-25.

Dye, R. A. (1998). Investor sophistication and voluntary disclosures. Review of accounting studies, 3(1), 261-87.

Friend, D. (1982). The new promise of graphic information systems. Finance Executive, 50(2), 20-26.

Gibson, C. H. & Schroeder, N. (1990). Improving your practice - graphically! *CPA Journal*, 60(8), 28-37.

Graves, O. F., Flesher, D. L. & Jordon, R. E. (1996). Pictures and the bottom line: The television episteminology of U.S annual reports. Accounting, Organization and Society, 21(1), 60-70.

Green, P., Kirk, R. & Rankin, C. (1992). Graphs: The use and abuse. Certified Accountant, November, 34.

Holmes, G. (1984). How to present your message graphically. Accountancy, 95 (1088), 64-71.

Houghton, K. & Smith, S. (2003). Accounting Information: Explaining the use of graphs in corporate takeovers, paper presented at the School of Accountancy, Universiti Utara Malaysia, Jitra, August 18.

Johnson, J. R., Rice, R. R. & Roemmick, R. A. (1980). Picture that lie: The abuse of graphs in annual reports. Management Accounting, October, 50-56.

Libby, R. & Lewis, B. L. (1977). Human information processing research in accounting: The state of the art. Accounting, Organizations and Society, 2, 245-68.

Mather, P., Ramsay, A. & Serry A. (1996). The use and representational faithfulness of graphs in annual reports: Australian evidence. Australian Accounting Review, 6(2), 21-30.

Mather, P., Ramsay, A. & Steen, A. (2000). The use and representational faithfulness of graphs in Australian IPO prospectuses. Accounting, Auditing and Accountability Journal 13(1), 65-83.

Mohd. Diah, H. & Azhar, A. R. (2001). The use of graphical information in annual reports of Malaysian companies: A longitudinal study. Unpublished research done with school grant, School of Accountancy, Universiti Utara Malaysia, Jitra.

Neu, D. (1991). Trust, impression management and the public accounting profession. Critical Perspective on Accounting, 2(3), 76-85.

Nor Asiah, M. S., Taufik, H. & Narimah, H. (2004). The presentation of graphs in annual reports of Malaysian finance companies. Unpublished research, Faculty of Economic and Management, Universiti Putra Malaysia, Serdang

Pava, M. L. & Epstein, M. J. (1993). The shareholder's use of annual corporate reports. JAI Press Inc., London.

Pijper, T. (1993). Creative accounting: The effectiveness of financial reporting in the U.K, MacMillan, BasingStroke.

Preston, A. M., Wright, C. & Young, J. J. (1996). Imagining annual reports. Accounting, Organizations and Society, 21(1), 110-119.

Ram Al Jaffri, S. (2004). Malaysian financial graphs: An empirical study. Unpublished research, Faculty of Accountancy, Universiti Utara Malaysia, Jitra.

Rosiatimah, M. I., Hasnah, H., & Sofri, Y. (2006). Graphical information in corporate annual report: An exploratory survey of users' perceptions. *Malaysian Accounting Review*, 5(2).

Ross, S. A. (1979). Disclosure regulation in the financial markets: Implications of modern finance theory and signaling theory. Issues in Financial Regulation, McGraw-Hill, New York.

Securities commission (2005). Retrieved June 20, 2005, from http://www.sc.com.my

Shamharir, A., Md. Suhaimi, M. S. & Nurwati, A. Z. (2000). Disclosure of graphical information in annual reports: A preliminary study of the KLSE listed companies. Unpublished research, School of Accountancy, Universiti Utara Malaysia, Jitra.

Smith, L. M. & Bain, C. E. (1987). Computer graphics for today's accountant. *CPA Journal*, 57, 18-35.

Steinbert, P. T. (1989). The auditor's responsibility for the accuracy of graphs in annual reports: Some evidence of the need for additional guidance. Accounting Horizons, 3(3), 60-70.

Thomas A. P. (1991). Towards a contingency theory of corporate financial reporting systems. *Accounting, Auditing and Accountability Journal*, 4(4), 40-57.

Verrechia, R. (1986). Managerial discretion in the choice among financial reporting alternatives. *Journal of Accounting and Economy*, 5(3), 173-90.